

<b>Level:</b> Bachelor of Science in Biochemistry				
<b>Course title:</b> Stereochemistry of biomolecules, B-601				
<b>Status:</b> Obligatory				
<b>ECTS:</b> 6				
<b>Requirements:</b>				
<b>Learning objectives:</b> Introduction to 3D structures of primary and secondary biomolecules and selected drugs as well as with the influence of the 3D structure on function, reactivity and biological activity of molecules.				
<b>Learning outcomes:</b> A student develops a sense of three-dimensional structure of the biomolecules and drugs. After successful completion of this course, a student is able to understand the influence of three-dimensional structure on function, reactivity and biological activity of biomolecules and drugs.				
<b>Syllabus</b>				
<i>Theoretical instructions</i>				
Stereoisomerism. Symmetry and asymmetry. Hilarity. Pseudo-chirality. Prostereoisomerism. Torsion stereoisomerism. Topoisomerism. Configuration and conformation of monosaccharides and carbohydrates, fatty acids, amino acids and proteins, nucleosides and polynucleic acids. Configuration and conformation of selected secondary biomolecules. Chiral recognition. Methods for obtaining enantiomerically pure compounds. Stereochemistry of selected drugs and their activity.				
<i>Practical instructions</i>				
Audio-visual practical: Solving stereochemistry problems. Application of molecular models and selected chemistry software for generating and understanding three-dimensional structure.				
<b>Weekly teaching load</b>				<b>Other:</b>
Lectures: 3 (45)	Exercises: 2 (30)	Other forms of teaching:	Student research:	